

WHAT IS CLAIMED IS:

1. A graphics controller for controlling a display monitor of a computer, comprising:

a register configured to be accessed through a bus
5 of the computer and to store state control data designating a state that the graphics controller is to assume;

a logic unit configured to operate in a working state and a low power-consumption state and to transit
10 to the working state or the low power-consumption state in accordance with the state control data stored in the register; and

a state controller configured to invalidate the state control data designating the low power-
15 consumption state stored in the register, thereby to maintain the logic unit in the working state.

2. The graphics controller according to claim 1, wherein the state controller includes a switch provided between the register and the logic unit and configured
20 to prohibit the state control data designating the low power-consumption state from being transmitted from the register to the logic unit.

3. The graphics controller according to claim 1, wherein the state controller has a first mode for
25 prohibiting the logic unit from transiting to the low power-consumption state and a second mode for allowing the logic unit to transit to the low power-consumption

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state, and the state controller invalidates the state control data designating the low power-consumption state, in the first mode.

4. The graphics controller according to claim 3,
5 further comprising a register configured to be accessed through the bus of the computer and to store mode-designating data that designates either the first mode and the second mode.

5. The graphics controller according to claim 3,
10 further comprising an input pin configured to receive from an external device a mode-designating data that designates either the first mode and the second mode.

6. The graphics controller according to claim 1,
15 wherein the state controller includes a selector configured to transmit to the logic unit either fixed data of the same value as state control data representing the working state or the state control data to be stored into the register; and the selector selects the fixed data while the state controller is
20 operating in a first mode to prohibit the logic unit from transiting to the low power-consumption state, and selects the register while the state controller is operating in a second mode to allow the logic unit to transit to the low power-consumption state.

25 7. The graphics controller according to claim 1, wherein the low power-consumption state is a off state in which the operation of the logic unit is stopped.

8. The graphics controller according to claim 1, further comprising a control register configured to be accessed through the bus of the computer and to store control data for controlling a power consumption of the logic unit stayed in the working state.

9. A computer system in which an operating system performs power management control, said computer system comprising:

a graphics controller configured to control a display monitor and including a logic unit which operates in a working state and a low power-consumption state and which consumes less power in the low power-consumption state than in the working state;

a register provided in the graphics controller and configured to store state control data for transiting the logic unit to either the working state or the low power-consumption state;

a CPU that writes into the register the state control data designating the low power-consumption state, in accordance with an instruction from the operating system; and

a state controller provided in the graphics controller and configured to invalidate the state control data designating the low power-consumption state stored in the register, thereby to prohibit the logic unit from transiting to the low power-consumption state from the working state.

the bus of the computer and to store mode-designating data that designates either the first mode and the second mode.

5 17. The device according to claim 15, further comprising an input pin configured to receive from an external device a mode-designating data that designates either the first mode and the second mode.

10 18. The device according to claim 13, the state controller includes a selector configured to transmit to the logic unit either fixed data of the same value as state control data representing the working state or the state control data to be stored into the register; and the selector selects the fixed data while the state controller is operating in a first mode to prohibit the
15 logic unit from transiting to the low power-consumption state, and selects the register while the state controller is operating in a second mode to allow the logic unit to transit to the low power-consumption state.

20 19. A method of controlling a graphics controller including a register configured to store state control data for causing the graphics controller to transit to a working state or a low power-consumption state, said method comprising:

25 invalidating the state control data designating the low power-consumption state stored in the register, thereby to prohibit the graphics controller from

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transiting to the low power-consumption state from the working state; and

controlling the operation of the component of the graphics controller, in order to reduce a power consumption of the graphics controller stayed in the working state.

20. A method of controlling a device which is used as a hardware component in a computer and includes a register configured to store state control data for causing the device to transit to a working state or a low power-consumption state, said method comprising:

invalidating the state control data designating the low power-consumption state stored in the register, thereby to prohibit the device from transiting to the low power-consumption state from the working state; and

controlling the operation of the component of the device, in order to reduce a power consumption of the device stayed in the working state.

21. A computer system comprising:

a graphics controller configured to control a display monitor and including a logic unit which operates in a working state and a low power-consumption state and which consumes less power in the low power-consumption state than in the working state; and

a CPU configured to designate the graphics controller to transit to the low power-consumption state, in accordance with an instruction from an

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operating system;
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wherein the CPU sends out an instruction, which invalidates the designation to transit to the low power-consumption state, to the graphics controller, in accordance with an BIOS, thereby to prohibit the logic unit from transiting to the low power-consumption state from the working state.